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# United States Department of Agriculture,

## BUREAU OF PLANT INDUSTRY,

Seed and Plant Introduction and Distribution,

WASHINGTON, D. C.

### GUAR (*Cyamopsis psoralioides*).

Guar is an erect-growing East Indian annual legume, very different in appearance from any legume grown in this country. It is characterized by an enormous production of pods. The pods are further distinguished by the fact that they do not burst open at maturity, as is generally the case with legumes. When supplied with sufficient moisture guar grows to a height of 5 to 6 feet, but under arid conditions only 3 to 4 feet. Guar is especially characterized by its enormous drought resistance. At Chico, Cal., a fine crop was produced without a drop of rain falling upon it from the time it was planted until nearly ready to harvest. During the whole season these plots showed no suffering whatever from the drought, which seriously affected adjoining plots of Kafir corn and sorghum. It is believed, therefore, that this crop will be especially valuable as a legume for the arid southwest quarter of the United States.

In India the plant is grown both for green forage and for the seed, which is used mainly to fatten cattle. The seeds are highly nutritious, containing over 32 per cent of protein. The green pods are also used as a vegetable in the same manner as string beans.

Owing to the fact that the pods do not burst open at maturity, guar can be harvested with an ordinary binder and thrashed with an ordinary thrashing machine. The indications are that the yield even under conditions of severe drought will reach 15 to 20 bushels per acre and perhaps more. There are a great many varieties grown in India, some of them being erect and single stemmed; others branched from the base. The ones with the upright stems are likely to be the most easily harvested. Some of the varieties have much larger seeds than others, and these will probably yield more heavily. If the crop should prove to be as valuable in the Southwest as it now seems, it will be possible to bring about great improvement through selection.

Guar has likewise proved to be well adapted to the Southern States. It is doubtful, however, whether it will mature its seed satisfactorily under humid conditions, and it remains to be seen whether it will prove sufficiently valuable as forage alone to compete with other annual legumes.

*Sowing.*—Guar may be sown broadcast, using a bushel of seed to the acre. This will produce a dense stand and comparatively slender stems, so as to permit of easy harvesting, or it may be drilled in rows far enough apart to cultivate, sowing the seed 2 to 3 inches apart in the rows. Both of these methods should be tested side by side to determine which gives the best results.

*Suggestions.*—It should be remembered that this crop is as yet in an experimental stage in the United States, but the indications are exceedingly promising that it will prove to be of high value in the arid regions where the season is warm enough for it to mature. No other annual legume is so drought resistant, and judging from limited experiments it would appear that profitable crops can be grown where no other legume would succeed. There is no doubt that the seed will prove of high value as stock feed, and it may be valuable as human food, as it is used in this way by some of the tribes in India.



